Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (original) A method of cone beam CT scanning in which respiration correlation techniques are applied to the acquired two-dimensional projection images.

2. (original) A method of cone beam CT scanning according to claim 1 in which the phase of the patient's breathing is monitored continuously during acquisition of projection images.

3. (original) A method of cone beam CT scanning according to claim 2 in which projection images that have comparable breathing phases are selected from the complete data set on completion of the acquisition and are used to reconstruct the volume data.

4. (original) A method of cone beam CT scanning according to claim 2 in which a feature in the projection image(s) is used to determine the breathing phase.

5. (original) A method of cone beam CT scanning according to claim 4 in which the feature is the position of the patient's diaphragm.

6. (original) A method of cone beam CT scanning according to claim 1 in which visual and/or audible prompts are provided for the patient's breathing.

7. (original) A method of cone beam CT scanning according to claim 1 in which therapeutic radiation is delivered during the scan at times correlated with the patient's breathing cycle.

8. (original) A cone beam CT scanner including means for acquiring information as to the patient respiration cycle and means for selection of acquired two-dimensional projection images from the set of data acquired during a scan on the basis of the respiration cycle information.

9. (original) A cone beam CT scanner according to claim 8 adapted to monitor the phase of the patient's breathing continuously during acquisition of projection images.

10. (original) A cone beam CT scanner according to claim 9 arranged to select projection images that have comparable breathing phases from the complete data set on completion of the acquisition and to use these to reconstruct the volume data.

11. (original) A cone beam CT scanner according to claim 9 including means for detecting a respiration-cycle-correlated feature in the projection image(s) thereby to determine the breathing phase.

12. (original) A cone beam CT scanner according to claim 11 in which the feature is the position of the patient's diaphragm.

13. (currently amended) A cone beam CT scanner according to claim ~~7~~ 8 including means to

provide visual and/or audible prompts for the patient's breathing.

14. (original) A radiotherapy device comprising a cone beam CT scanner and a source of

therapeutic radiation, in which the CT scanner applies respiration correlation techniques to the

acquired two-dimensional projection images and therapeutic radiation is delivered during the

scan at times correlated with the patient's breathing cycle.